

# Notice of Allowability

Application No.

09/819,022

Examiner

Merilyn P Nguyen

Applicant(s)

IIVONEN ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/12/2004.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☒ The drawings filed on 26 March 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***DETAILED ACTION***

1. In response to the communication dated 12/10/2004, claims 1-30 are active in this application as a result of the addition of claims 27-30 and in the condition for allowance. The reasons for allowance are stated in the previous Final Office Action mailed September 24, 2004 and reiterated herein below for convenience.

***Acknowledges***

2. Receipt is acknowledged of the following items from the Applicant.
- The applicant's amendments dated 12/10/2004 have been considered.

***Allowable subject matter***

3. The following is an examiner's statement of reason for allowance:

The prior art of record (Poole, U.S Patent No. 5,276,868, and Namba, U.S Patent No. 5,721,899, and Tikkanen, U.S Patent No. 5,848,416) fails to disclose or suggest the claimed limitations of (in combination with all other features in the claim), implementing a functional memory, wherein memory data is stored as data units for each of which dedicated storage space is assigned in the memory comprising implementing a memory as a directory structure comprising a tree-shaped hierarchy having nodes at several different levels, wherein an individual node is a trie node associated with a logical table and implementing trie nodes as quad nodes of four elements, and replacing in at least part of the directory structure groups of successive nodes by compressed nodes by replacing an individual group comprising a given quad node and its child by a node whose logical table has 16 elements, and forming a

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compressed node known per se from said node of 16 elements by physically storing in the compressed node non-nil pointers and a bit pattern on a basis of which a physical storage location in the compressed node, corresponding to the search word, is determined, in conjunction with the remaining, salient claim provisions as claimed in claim 1. Similar features are claimed in claims 12, 23, and 25; therefore, claims 12, 23, and 25 are allowable over the prior art of record for the same reasons.

Claims 2-11, 13-22, 24, and 26-30 are allowed over the prior art of record, because it is dependent from the allowed base claims.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

### ***Conclusion***

5. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bugajski U.S Patent No. 5,592,667 discloses method of storing compressed data for accelerated interrogation.

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Doeringer U.S Patent No. 5,787,430 discloses variable length data sequence backtracking a trie structure.

Au U.S Patent No. 5,829,004 discloses device for storage and retrieval of compact contiguous tree index records.

Soheili-Arasi U.S Patent No. 5,684,976 discloses method for reduced address tags storage within a directory having a tree-like structure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Merilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*MN*

MN  
February 2, 2005

*Frantz Coby*  
**FRANTZ COBY**  
**PRIMARY EXAMINER**